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455976 -- Patent Information

Published Serial No.	**455976**
Title	**Endpoint detection method of chemical mechanical polishing processby finding the derived function through the intensity variations of reflected light versus time and using the slope of derived function versus time to establish the endpoint of CMP**
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| Abstract | The present invention discloses a kind of endpoint detection method for chemical mechanical polishing (CMP) process. |

The invented method is suitable for use in the integrated circuit process that adopts the self-aligned contact having plural polysilicon layers. After the first polysilicon layer, the first inter-polysilicon dielectric layer, the second polysilicon layer, and the second inter-polysilicon dielectric layer are continually formed on a semiconductor substrate, the third polysilicon layer is formed. After a silicon nitride layer is formed on the third polysilicon layer, an inter-layer dielectric layer is formed and is followed by using the CMP method to perform a planarization treatment onto the inter-layer dielectric layer. The endpoint detection method for CMP process stated above uses a laser light beam to irradiate on the inter-layer dielectric layer and measure the intensity of the reflected light. The key point of the present invention is to find the derivative function through the intensity variations of reflected light versus time, and use the slope of derivative function versus time to establish the endpoint of CMP.